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Dewatering

Description

Dewatering is the removal of ground or surface water from a construction site to allow construction to be done "in the dry" (as opposed to under wet conditions). Water is usually removed using well points and power driven pumps. Dewatering of cofferdams and trenches is a common practice during the construction of bridges, culverts and public utilities (see the Watercourse Crossings BMP).

Other Terms Used to Describe

Pumping

Pollutants Controlled and Impacts

Proper dewatering techniques will filter water of sediment, oils, and other chemicals, thus preventing these pollutants from entering the surface waters.

Application

Land Use
Transportation (highway construction), urban (utility construction, and commercial development), and construction sites.

Soil/Topography/Climate
Dewatering is important in areas that have high ground water tables, or which do not have adequate drainage.

When to Apply
Apply at the beginning of and during construction when it is necessary to lower the ground water table. Pumping needs to be maintained to keep utility ditches and cofferdams dry until all underground work is completed.

Where to Apply
Apply on construction sites, where appropriate, or anywhere else dewatering is done.

Relationship With Other BMPs

Dewatering is often implemented in conjunction with Watercourse Crossings. Sediment Basins and Filters should be considered to help filter the dewatered water before it is discharged to a surface water.

Specifications

1. Dewatering must be done so that the velocity of the discharged water doesn't cause scouring of the receiving area. If the receiving area is a structural BMP (i.e. basin or sump), the design of the BMP should be based on the anticipated flow from the dewatered area.

2. Sediment-laden water from cofferdams, trenches and other areas which need to be dewatered, should be pumped through a geotextile material before the water is discharged to a watercourse. See the Filters BMP. The filter bag should be disposed of by the contractor at an upland site.

3. If the dewatered water is discharged through a filter to a county or inter county drain, permission must be obtained from the drain commissioner or drain board.

Maintenance

The dewatering site should be inspected several times daily to ensure that the pumping procedure is adequately controlling the excess water, to ensure the filter bag is not clogged, and that the vegetative filter, where used, is still retaining sediment. If the filter bag becomes clogged, replace with a new one. If sediment basins are used, be sure to follow maintenance procedures included in the Sediment Basin BMP.